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## **Do Pre-service Teachers Feel Ready to Teach in Inclusive Classrooms? A Four Country Study of Teaching Self-efficacy.**

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*Abstract: This paper reports the results of an international study examining pre-service teacher reports of teaching self-efficacy for inclusive education; principally focusing on the explanatory relationship between a scale designed to measure teaching self-efficacy in this area and key demographic variables within Canada, Australia, Hong Kong, and Indonesia. The study builds on earlier work by this research team on attitudes towards inclusion and offers a more comprehensive picture of pre-service teachers' preparedness to teach in inclusive classrooms. Data were collected from 380 pre-service teachers in four countries. Results indicated that strong international differences existed. Other factors impacting responses regarding teaching self-efficacy for inclusion include the type of teacher preparation program offered by the institution; variations in the level of knowledge about inclusion law and policy; previous interactions with people with disabilities; confidence levels in teaching people with disabilities; and, prior teaching experience and training in working with students with disabilities. Implications for ongoing development of international teacher preparation programs are discussed within the context of improving self-efficacy.*

### **Introduction**

There is increasing recognition that effective inclusive teachers (i.e. those who cater to the needs of all within regular neighbourhood schools and classrooms) need to exhibit positive traits and skills in three areas: head, heart, and hands. Rouse (2010) argues that “there have to be changes in the ways inclusion is conceptualised and a realisation that it can only be achieved if all teachers are supported in the development of all aspects of knowing, doing and believing” (p. 51). Rouse views this as meaning, in practical terms, the development of cognitive knowledge and the theoretical basis of the profession (head); the development of ethical and moral attitudes and beliefs reflected in one’s behavior (heart); and the acquisition of technical and practical skills necessary to carry out the essential roles of the profession (hands). Each of these areas is under investigation by various researchers examining teacher attitudes and inclusion (for example Sharma, Forlin, & Loreman, 2008), inclusive teaching skills (for example Florian & Linklater, 2010), and knowledge acquisition relative to inclusive teaching (for example Coates, 2012). One

area that touches on all three of these areas is teaching self-efficacy for inclusion. How teachers perceive their teaching self-efficacy has a lot to do with the attitudes they hold, and the knowledge and skills they believe they have developed.

This paper reports the results of research examining pre-service teacher perceptions of teaching self-efficacy for inclusive education in four countries. It examines relationships between teaching self-efficacy and a number of demographic variables, including: area of teacher preparation; gender; age; highest level of previous education; the presence of a disability; training on educating students with disabilities; confidence levels for teaching students with disabilities; knowledge of local law and policy, geographical/cultural differences, and; experience teaching students with disabilities.

### **Teaching Self-Efficacy**

Self-efficacy, or “...a belief in one’s personal capabilities...”, (Bandura, 1997, p. 4) is important for teachers to develop in the area of teaching in inclusive classrooms because of its role in regulating classroom teaching practice. This regulation takes place in four ways, which are cognitive, for example involving what aspirations a teacher has to practice inclusively, and what tasks they choose to undertake; motivational, for example the goals they set and how much they persevere in the face of setbacks; mood or affective, for example, the levels of stress they encounter as a result of engaging in inclusive teaching practice; and selective approaches, the decisions they make in the classroom with respect to creating an inclusive environment and engaging in inclusive pedagogy (Bandura, 1994). According to Bandura, self-efficacy beliefs are developed through experience. These include prior experiences of mastery of the task, social persuasion (where others tell an individual that they are good at something), identifying with another seen as competent in the area (called vicarious experiences), and the variable emotional and physiological state of the individual (Klassen, 2004).

Teaching self-efficacy is a context specific construct. The notion of general self-efficacy is vague at best and implies the dubious belief that a person can be good at virtually all things, with Bandura noting that self-efficacy occurs within the confines of a particular situation (Chen, Gully, & Eden, 2001). Therefore, teaching self-efficacy studies should be framed in terms of perceptions about performance in a given area. In this study, that area is teaching self-efficacy for inclusive practice. This means exploring feelings of personal competence for teaching in a classroom in which all students, regardless of ability, are educated together in common educational contexts (Andrews & Lupart, 2000). The type of skills involved typically include differentiating instruction, adjusting and configuring curriculum, and adopting pedagogical methods that satisfy the learning needs of a wide variety of learners. Possibly as a result of low feelings of teaching self-efficacy in inclusive teaching practice some educators have reported feelings of anxiety about the implementation of the approach (Macmillan & Meyer, 2006), viewing themselves as being under-trained and under-skilled to meet the demands of managing an increasingly diverse classroom (Andersen, Klassen, & Georgiou, 2007). Research indicates that feelings of teaching self-efficacy for inclusive teaching practice in pre-service teachers are inversely proportional to the perceived severity of the disabilities of students included in the class, i.e. the more severe the disabilities, the less efficacious pre-service teachers feel (Lifshitz & Glaubman 2002). These research findings are of concern because research from general self-efficacy area suggests that teaching is “...powerfully related to many meaningful educational outcomes, including teachers’ persistence, enthusiasm, commitment and instructional behaviour,

and student outcomes, such as achievement, motivation, and self-efficacy beliefs" (Tschanne-Moran & Woolfolk-Hoy, 2001, p. 783).

One aspect of teaching self-efficacy for inclusive teaching practice that is both noteworthy and encouraging is that teacher education seems to have a positive impact. Romi and Leyser (2006) conducted a study involving pre-service teachers in Israel and concluded that a positive sense of self-efficacy related to teaching lower achieving students was higher than general teaching self-efficacy and that female students were more positive about inclusion and had higher self-efficacy scores than did males. Clearly, there was an aspect of their teacher education program that enabled these pre-service teachers to view themselves as competent when it came to adjusting their teaching practice to teach a wider range of students. Lancaster and Bain (2007) found that pre-service teacher measures of self-efficacy correlated strongly with their level of participation in an inclusive education course. As noted in previous work, the important area regarding pre-service teacher perceptions of teaching self-efficacy with respect to inclusion which is the focus of this study, has not been adequately addressed. This paper is one of a series exploring teaching self-efficacy in the area of inclusive teaching practice (see Forlin, Sharma, & Loreman, 2012; Sharma, Loreman, & Forlin, 2012). The rationale is that research such as this will inform teacher educators with respect to how pre-service teachers feel about their teaching self-efficacy for inclusive teaching practice and which demographic variables are noteworthy, so that more effective courses may be developed to address pre-service teachers' concerns.

An international study on this topic is also important, relevant, and timely. Teaching self-efficacy studies across cultures have found that it is an international construct, understood equally well through languages and cultures (Schwarzer, Born, Iwawaki, & Lee, 1997). Countries may have much to learn from one another, and a comparison and consideration of any differences that may exist between countries might produce a heightened awareness of issues that need to be addressed.

Consistent with previous studies involving pre-service teachers and attitudes towards inclusion (see Sharma et al., 2008 as one example), data gathered from an international context is useful in comparing the highly diverse teacher education practices that exist around the world. Particularly compelling is the comparison of eastern and western countries and cultures. This assists not only in explaining the results, but also in pinpointing areas where assistance and advice may be usefully exchanged between countries. Sharma, Forlin, and Loreman (2007), examining pre-service teacher concerns about inclusive education, found that pre-service teachers in Hong Kong and Singapore were more concerned than pre-service teachers in Canada and Australia, concluding that "...the cultural and educational background of participants from Asia may also explain these results to some extent" (p. 105). Similar results were gleaned from an international study conducted under similar conditions on pre-service teacher attitudes, sentiments, and concerns about inclusive education (Sharma et al., 2008).

## **Method**

### **Geographic Scope of the Study.**

Data were collected from 380 pre-service teachers in four teacher preparation institutions in Canada, Australia, Hong Kong, and Indonesia. The countries were chosen, in part, to further investigate Klassen's (2004) finding regarding east-west cultural differences with respect to teaching self-efficacy. Table 1 below describes the context in each country.

| Country   | N   | Level of program                   | Timing of survey                           | Type of program                               | Length of program                 | Admission req's. |
|-----------|-----|------------------------------------|--|---|-----------------------------------|------------------|
| Canada    | 71  | Primary                            | Beginning of program                       | Content infusion (no single inclusion course) | 2 yrs                             | Prior degree     |
| Australia | 111 | Primary/ Secondary                 | Beginning of course on inclusive education | Single course on inclusive education          | 1 yr                              | Prior degree     |
| Hong Kong | 97  | Primary/ Secondary                 | Beginning of course on inclusive education | Single course on inclusive education          | 4 yrs                             | High school      |
| Indonesia | 101 | Kindergarten and special education | Beginning of course on inclusive education | Single course on inclusive education          | 2 yrs (K) and 3 yrs (Special Ed.) | High School      |

**Table 1: Country-by-country program and survey information**

### Instrumentation

As this study examines teaching self-efficacy specific to inclusive education, an instrument which satisfied the main relevant areas germane to this approach was employed. This scale was an early version of the for Inclusive Practice scale (TEIP; Sharma et al., 2012), and was derived from a review of the literature and other existing scales on teacher self-efficacy, along with refinement and review by a group of experts in the field. The scale comprised of 20 questions examining different aspects of teaching self-efficacy for preparedness to teach in an inclusive context. These questions were comprised of the 18 questions on the validated version of the TEIP (Sharma et al., 2012) along with two additional questions. The items include those relating to assessment, classroom management, instruction, working with others, and professional issues. Respondents indicated their answers on a six-point Likert scale of Strongly Disagree (1), Disagree (2), Disagree Somewhat (3), Agree Somewhat (4), Agree (5), and Strongly Agree (6). A higher score indicated more positive feelings of teaching self-efficacy specific to inclusive education. This early version of the TEIP scale was developed using a combined pilot sample of pre-service teachers from Australia, Canada, and India, and validated on a sample of Indonesian in-service teachers (Sharma, Forlin, Loreman, & Earle, 2010). Data used in the current study were subjected to principal components analysis which confirmed the presence of three subscales consistent with the subscales identified by Sharma et al. (2012); Efficacy to use inclusive instruction (Factor One); Efficacy for managing behaviour (Factor Two); and, Efficacy in collaboration (Factor Three) explaining 39.92%, 23.31%, and 7.29% of the variance respectively. The Cronbach alpha score for each factor with respect to this sample was .95, .86, and .86 respectively.

In addition to these scales, participants responded to a selection of demographic variable questions asking for information about the area in which they were training; gender; age; highest level of education completed; interactions, teaching experience, and training concerning people

with disabilities; knowledge of relevant legislation and policy, and; confidence in teaching students with disabilities.

### Sample

| Variables   | Demographic information   |
|---|---|
| Area of teaching  | Early childhood: 17.4%<br>Primary/Elementary: 20.5%<br>Secondary: 49.7%<br>Special education: 12.4% |
| Gender  | Male: 15.2%<br>Female: 84.8%  |
| Age   | Under 29 years: 81.6%<br>30-39 years: 12.1%<br>40+ years: 6.3%                                      |
| Prior education   | Secondary school: 35.3%<br>Bachelor degree: 47.4%<br>Masters degree or higher: 17.3%                |
| Confidence level in teaching students with disabilities       | Very low: 5.5%<br>Low: 27.1%<br>Average: 42.4%<br>High: 20.3%<br>Very high: 4.7%                    |
| Previous teaching experience with children with disabilities  | None: 50.5%<br>Some: 38.9%<br>High (30 days+): 10.5%  |
| Previous training in teaching people with disabilities        | None: 59.8%<br>Some: 37.4%<br>High (40 hrs+): 6.6%  |
| Significant prior interactions with people with disabilities. | Yes: 46.8%<br>No: 53.2%   |
| Knowledge of inclusion law/policy                             | None: 8.7%<br>Poor: 25.3%<br>Average: 30.0%<br>Good: 29.2%<br>Very Good: 6.8%                       |

**Table 2: Sample demographics**

## Results

The data were subjected to analysis of variance in order to investigate the potential influence of selected demographic variables on the *a priori* theorized constructs measured by the TEIP scale proposed in this paper (Table 2). Statistical power was evaluated according to guidelines outlined by Ferguson (2009) where moderate effect is .25 and strong effect is .64.

### Analysis of Demographic Variables Against Total Scale

Table 3 shows the mean scores of the demographic variables that had differing levels of impact on teaching self-efficacy. Some demographic variables, such as area of teacher preparation, age, gender, and education level had no impact on responses to the scale, however, as noted in Table 3, many demographic variables did have an impact on responses. Previous teaching experience with children with disabilities, interactions with people with disabilities, and knowledge of law and policy with respect to inclusive education all had statistically significant relationships with teaching self-efficacy scores, however, the statistical power measured by partial eta squared was small. Similarly, while highly or very highly significant, confidence levels in teaching students with disabilities and previous training in special education demonstrated relatively low statistical power in relation to teaching self-efficacy scores. The country variable was significant ( $p = <.001$ ) and had small to moderate statistical power with a partial eta squared value of .163.

| Variables                                 | Means (SD)  | F value | Partial Eta Square |
|---|---|---------|--------------------|
| Confidence level                          | Very low: 4.01 (.64)<br>Low: 4.22 (.71)<br>Average: 4.41 (.55)<br>High: 4.43 (.55)<br>Very high: 4.16 (.63) | 3.75**  | .040               |
| Country                                   | Canada: 4.51 (.64)<br>Australia: 4.53 (.56)<br>Indonesia: 4.38 (.60)<br>Hong Kong: 3.93 (.47)               | 23.2*** | .163               |
| Previous teaching experience              | None: 4.24 (.61)<br>Some: 4.44 (.59)<br>High: 4.34 (.68)  | 4.22*   | .023               |
| Interaction with people with disabilities | Yes: 4.44 (.62)<br>No: 4.23 (.60)   | 5.25**  | .028               |
| Knowledge of law/policy                   | None: 4.07 (.68)<br>Poor: 4.25 (.66)<br>Average: 4.46 (.61)<br>Good: 4.38 (.52)<br>Very good: 4.14 (.61)    | 3.92*   | .042               |
| Previous training in special education    | None: 4.22 (.63)<br>Some: 4.48 (.51)<br>High: 4.35 (.82)  | 5.96*** | .048               |

\*  $p < .05$    \*\*  $p < .01$    \*\*\*  $p < .001$

**Table 3: Univariate analysis of variance of demographic variables against total scale**

*Post-hoc* testing revealed that pre-service teachers in Hong Kong reported significantly lower levels of teaching self-efficacy with respect to inclusion than their counterparts in all other countries. This is a meaningful difference given the level of significance ( $p = <.001$ ) and high statistical power.

Previous training in special education was also significant at ( $p = <.001$ ) with post hoc testing showing the difference being between those with no training who reported lower levels of teaching self-efficacy for inclusion than and those who have had some training.

With respect to level of confidence, which was also highly significant, post hoc testing showed that those reporting very low levels of confidence reported significantly different responses on the TEIP to those reporting average levels of confidence. This finding was not surprising as the confidence level to teach in inclusive classrooms corresponds highly teaching self-efficacy beliefs and thus close association between the two scores was expected. Similarly, previous teaching experience also produced statistically significant results against the total scale, with post hoc testing showing those with no experience reporting lower levels of perceptions of teaching self-efficacy for inclusion than those with some experience. Finally, post hoc testing revealed similar results with respect to knowledge of local law and policy with respect to

inclusive education, with those having no knowledge reporting significantly lower levels of teaching self-efficacy against the total TEIP scale than those with average levels of knowledge. There appears to be a trend, then, of those with no or poor knowledge and a lack of experience in an area, reporting lower levels of teaching self-efficacy for inclusion than those reporting average or some knowledge and experience.

While these demographic differences against the whole scale are informative, they are limited in their usefulness because in a multidimensional scale like this one, such results do not pinpoint in which specific constructs the differences lie. If teacher preparation program responsiveness is the goal, then specific foci must be identified. For this reason, the demographic variables were subsequently analyzed with respect to each of the three sub-factors evident in the scale, namely; efficacy to use inclusive instruction, efficacy in managing behavior, and efficacy in collaboration.

**Analysis of Demographic Variables Against Factor One: Efficacy to Use Inclusive Instruction.**

Table 4 shows that on Factor One that country, level of education, and knowledge of law and policy variables, were significant ( $p \leq .001$ ), however, only the country variable exhibited low to moderate statistical power (partial eta squared = .177). Responses on prior training in special education, confidence levels, and knowledge of law and policy also exhibited statistical significance on this factor ( $p \leq .01$ ), albeit with comparatively lower levels of statistical power (partial eta squared = .031, .036, and .042 respectively). A total of 34.4% of the variation in teaching self-efficacy values reported by pre-service teachers can be accounted for by the five demographic variables listed in Table 4 above. An examination of F value and effect size calculations suggested that the most influential variables were country, previous training in special education, and interaction with people with disabilities.

| Variables                              | Means (SD)   | F value  | Partial Eta Square |
|--|--|----------|--------------------|
| Country                                | Canada: 4.54 (.69)<br>Australia: 4.81 (.57)<br>Indonesia: 4.37 (.69)<br>Hong Kong: 4.06 (.53)            | 26.34*** | .177               |
| Highest level of education             | Secondary school: 4.29 (.68)<br>Bachelor degree: 4.49 (.70)<br>Master's degree: 4.66 (.53)               | 7.27***  | .038               |
| Knowledge of law/policy                | None: 4.08 (.79)<br>Poor: 4.39 (.70)<br>Average: 4.56 (.65)<br>Good: 4.52 (.57)<br>Very good: 4.34 (.74) | 3.98**   | .042               |
| Previous training in special education | None: 4.36 (.70)<br>Some: 4.57 (.58)<br>High: 4.41 (.86)<br>Very Low: 4.09 (.80)<br>Low: 4.38 (.73)      | 3.89**   | .031               |
| Confidence Level                       | Average: 4.48 (.64)<br>High: 4.62 (.58)<br>Very High: 4.29 (.72)   | 3.38**   | .036               |

\*  $p < .05$    \*\*  $p < .01$    \*\*\*  $p < .001$

**Table 4: Univariate analysis of variance of demographic variables against factor one (Efficacy to use inclusive instruction).**

With respect to differences between countries on the teaching self-efficacy to use inclusive instruction subscale, post hoc testing revealed that Australian pre-service teachers were significantly higher in their responses on this subscale than all other countries. Conversely, pre-service teacher in Hong Kong reported lower levels of teaching self-efficacy in inclusive instruction than did their counterparts in all other countries.

Highest level of education was also statistically significant ( $p \leq .001$ ), although less statistically powerful than the country variable. Post-hoc testing revealed that those who had only completed a secondary level of education reported significantly lower levels of efficacy in inclusive instruction than those with both bachelor and master level degrees.

Table 4 shows that knowledge of law and policy was also highly significant although not particularly statistically powerful in relation to efficacy in inclusive instruction. Post-hoc tests revealed that those with no knowledge reported significantly lower responses on this factor than those reporting average or good knowledge.

With respect to previous training in special education, post-hoc testing revealed that those with no training reported significantly lower levels of efficacy in inclusive instruction than those with some training. Similarly, post-hoc testing with respect to confidence levels revealed that

those with very low levels of confidence in teaching students with disabilities were significantly lower in their responses against Factor One than those with high levels of confidence.

#### Analysis of Demographic Variables Against Factor Two: Efficacy in Managing Behavior

Table 5 shows that the country and previous training variables had a significant impact ( $p \leq .001$ ) on the teaching self-efficacy in managing behaviour factor, once again with the country of study variable having statistical power using partial eta squared of .107.

| Variables                    | Means (SD)  | F value | Partial Eta Square |
|------------------------------|---|---------|--------------------|
| Area of teaching             | Early childhood: 4.28 (.79)<br>Primary/Elementary: 4.47 (.77)<br>Secondary: 4.19 (.68)<br>Special education: 4.38 (.53) | 3.17*   | .026               |
| Confidence level             | Very low: 4.00 (.55)<br>Low: 4.19 (.80)<br>Average: 4.38 (.66)<br>High: 4.42 (.63)<br>Very high: 3.91 (.90)             | 4.08**  | .043               |
| Country                      | Canada: 4.51 (.73)<br>Australia: 4.42 (.66)<br>Indonesia: 4.36 (.70)<br>Hong Kong: 3.91 (.63)                           | 14.6*** | .107               |
| Previous teaching experience | None: 4.17 (.70)<br>Some: 4.41 (.66)<br>High: 4.40 (.85)  | 5.15**  | .027               |
| Previous training            | None: 4.13 (.73)<br>Some: 4.46 (.59)<br>High: 4.22 (.79)  | 7.17*** | .057               |

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

**Table 5: Univariate analysis of variance of demographic variables against factor two (Efficacy in managing behaviour)**

Confidence level and previous teaching were significant ( $p \leq .01$ ), although showed weak statistical power. The area of teacher preparation was also statistically significant. Country is a variable that continues to be highly significant and statistically powerful, as can be seen in Table 5. Post-hoc tests revealed that with respect to efficacy in managing behaviour pre-service teachers in Hong Kong were significantly lower in their responses on this factor than their counterparts in all other countries.

With respect to previous training in special education, another variable showing significance ( $p \leq .001$ ), those with some training reported significantly higher levels of teaching self-efficacy than did those with no training. While not as significant ( $p \leq .01$ ), responses with respect to experience in teaching students with disabilities echoed the results of training, with

those having no prior experience reporting significantly lower levels of teaching self-efficacy in efficacy in managing behaviour than those with some experience.

With respect to confidence levels in teaching students with disabilities, post hoc testing was very interesting in what it revealed. Those with very high levels of confidence in teaching students with disabilities reported significantly lower responses in terms of teaching self-efficacy in managing behaviour than did those reporting simply high levels. This appears to be an anomaly, as the difference between what might be considered 'high' and 'very high' levels of confidence is probably subtle at best.

Regarding area of teaching, post-hoc tests revealed that those preparing to become primary/elementary teachers reported significantly higher levels of efficacy in managing behaviour than did those preparing to become secondary school teachers.

**Analysis of Demographic Variables Against Factor Three: Efficacy in Collaboration.**

Table 6, reporting the impact of the demographic variables against the efficacy in collaboration subscale shows that once again the country variable is very significant ( $p \leq .001$ ) along with previous training and interaction with people with disabilities, although once again country was the only variable reaching statistical significance with statistical power using partial eta squared of .132. Area of teaching and knowledge of law and policy were statistically significant variables ( $p \leq .01$ ). Confidence level and prior teaching experience with children with disabilities were significant at  $p \leq .05$ .

| Variables                                   | Means (SD)  | F value  | Partial Eta Square |
|---|---|----------|--------------------|
| Area of teaching                            | Early childhood: 4.30 (.72)<br>Primary/Elementary: 4.45 (.72)<br>Secondary: 4.14 (.71)<br>Special education: 4.39 (.53) | 4.31**   | .035               |
| Confidence level                            | Very low: 3.97 (.58)<br>Low: 4.13 (.79)<br>Average: 4.38 (.61)<br>High: 4.29 (.70)<br>Very high: 4.24 (.62)             | 2.98*    | .032               |
| Country                                     | Canada: 4.47 (.74)<br>Australia: 4.40 (.70)<br>Indonesia: 4.39 (.65)<br>Hong Kong: 3.84 (.54)                           | 18.2***  | .132               |
| Previous teaching experience                | None: 4.18 (.70)<br>Some: 4.39 (.69)<br>High: 4.23 (.70)  | 3.59*    | .020               |
| Previous training                           | None: 4.13 (.73)<br>Some: 4.46 (.59)<br>High: 4.22 (.79)  | 7.17***  | .021               |
| Interactions with people with disabilities. | Yes: 4.41 (.68)<br>No: 4.14 (.70)   | 7.40 *** | .039               |
| Knowledge of law/policy                     | None: 3.99 (.83)<br>Poor: 4.16 (.74)<br>Average: 4.44 (.67)<br>Good: 4.30 (.62)<br>Very Good: 4.07 (.67)                | 4.09 **  | .044               |

\* p<.05 \*\* p<.01 \*\*\* p<.001

**Table 6: Univariate analysis of variance of demographic variables against factor three (Collaboration)**

Post hoc testing with respect to the most statistically significant and powerful variable, country, revealed that pre-service teachers in Hong Kong were significantly lower in their responses on this factor than their counterparts in all other countries. This has been a consistent trend throughout the analysis of responses to each of the sub-factors.

Prior training in working with students with disabilities was also significant ( $p \leq .001$ ), and consistent with responses on the other sub-factors of this scale with post-hoc testing revealing that those with no training reported significantly lower responses with respect to efficacy in collaboration than did those with some training. Similarly, although not as significant ( $p \leq .01$ ), post hoc tests showed that those reporting average levels of knowledge of local law and policy with respect to inclusion reported higher responses against the efficacy in collaboration subscale than those reporting either no or poor levels of knowledge.

Area of teaching once again proved to impact responses on the scale in a significant way ( $p \leq .01$ ), with post-hoc testing showing that those preparing to become primary teachers

reported significantly higher levels of self-efficacy in terms of efficacy in collaboration than did those preparing to become secondary school teachers.

The variables of confidence level in teaching students with disabilities and previous teaching experience variables also reached statistical significance ( $p \leq .05$ ), with post hoc testing showing those with low levels of confidence reporting significantly lower responses on this factor than those with average levels of confidence. Similarly, post hoc tests showed those with some teaching experience reported significantly higher levels of efficacy in collaboration than did those with no teaching experience.

## Discussion

The results of this study have a number of implications for teacher educators. Firstly, it must be remembered that the pre-service teachers involved in this study were at the beginning of their study on inclusive education, but at different levels of their training and some (for example, the Canadians) were at the very beginning of their teacher preparation program. In that respect, this study does not represent any sort of program evaluation in terms of how well each institution is preparing its pre-service teachers for inclusion. Rather, the results demonstrate the teaching self-efficacy of pre-service teachers with respect to inclusion when they commence study on inclusive education and, therefore, provide information for program emphasis in order to address specific areas of low teaching self-efficacy. Secondly, it must be remembered that this study examines reported inclusion teaching self-efficacy perceptions, not actual efficacy in classroom practice.

Many teacher educators know that where pre-service teachers are concerned, perception does not always match the reality of classroom practice (Gravett, Henning, & Eiselen, 2011). For this reason, a direct link between higher teaching self-efficacy for inclusion scores on this scale and subsequent competent inclusive classroom practice should not be assumed. Rather, this measure represents only their personal perception of confidence, knowledge, fears, doubts, beliefs, and attitudes with respect to inclusion and their own abilities.

Strong international differences were most apparent in the data, with pre-service teachers in Hong Kong consistently reporting lower inclusion self-efficacy scores than did their counterparts in all other countries both on the scale as a whole and on each of the three subscales. In terms of feelings of self-efficacy in the area of inclusive instruction, the Australians reported significantly higher responses than their counterparts in all other countries. These differences are, however, puzzling. Klassen (2004) found cultural differences in self-efficacy ratings in his meta-analysis of studies in education and business and vocational research, with those from non-Western cultural groups having a tendency towards lower ratings of self-efficacy which were, however, more predictive of subsequent functioning. Similarly, the results of a study on pre-service teacher concerns about inclusive education indicated the possible presence of an east-west cultural divide (Sharma et al., 2007). The results of this study, with responses from the Western countries of Australia and Canada being similar to those from the eastern country of Indonesia, however, are inconsistent with Sharma et al. and Klassen's findings.

In a previous international study conducted under similar conditions on pre-service teacher attitudes, sentiments, and concerns about inclusive education (Sharma et al., 2008), strong differences between the responses of students in the Eastern countries of Hong Kong and Singapore and those in the Western countries of Australia and Canada were found. In that study,

we surmised that these differences were the result of cultural differences that exist between Eastern and Western countries. With respect to self-efficacy for inclusion, however, the data in this study indicates that this seems not to be the case. Indeed, this study shows that when it comes to teaching self-efficacy, differences may well be much more subtle than East versus West, and that the prevailing cultural context in individual countries or smaller regions might prove to be a better context in which to frame the results. There is some evidence to support this notion. Salili, Chiu, and Lai (2001) argued that people in Hong Kong specifically had a tendency towards reporting lower feelings of self-efficacy, surmising that the role of humility in Chinese culture impacted the responses of individuals. This appears not to be the case in Indonesia, and there is some evidence to suggest that Indonesians broadly do not share this Confucian humility or Chinese world-view (Vickers & Fisher, 1999). Vickers and Fisher argue that the idea of common Asian values "...has not, so far, fitted into the same spaces of identity construction in Indonesia as it has in some other ASEAN states; there has been no room for it (p. 398)" and further, that "Particular problems arise for Indonesians if 'Asian values' were to be defined in terms of Confucianism (p. 386)" which, politically and perhaps culturally, are commonly rejected. Differences between eastern and western countries, then, need to be questioned, and while by no means definitive the results of this study suggest that caution needs to be exercised when making assumptions about culture as an explanation for research findings in this area.

Some interesting ideas related to practice in teacher education programs also arise from this, especially as universities are tending towards the admission of greater numbers of international students (Association of Universities and Colleges of Canada, 2007). Assumptions with respect to culture and teaching self-efficacy for inclusive practice might be made based on previous research results, however, these assumptions need to be tempered. Certainly cultural background still likely plays a role in self-efficacy for inclusive practice, but more important is the recognition by teacher educators that differences in this area are perhaps more subtle than previously thought. Changes to practice in teacher-educator programs should not be made before the views of the specific pre- and in-service teacher population are taken into account.

A number of interesting trends emerged with respect to other demographic variables examined in this study, and these trends seemed to be more or less consistent across the scale as a whole and each of the sub-factors for all countries. Similarities were evident in responses to some demographic variables, specifically in the areas of previous training focusing on the education of students with disabilities, confidence levels in teaching students with disabilities, experience in teaching students with disabilities, and knowledge of local legislation and policy as it relates to children with disabilities. The trend was, with a few exceptions, consistent. The pattern in these four demographic areas was for statistically significant differences to be found between those reporting no or low levels of experience, confidence, training, or knowledge in an area, and those reporting some or average levels. With a few exceptions, those reporting low or no knowledge, experience, confidence or training also reported lower feelings of teaching self-efficacy for inclusion generally, and in the sub-factor areas of instruction, behaviour management, and collaboration than did their counterparts reporting some or average levels. This is an informative pattern because it speaks to the value of training and experience (which one assumes also raises confidence and knowledge) in improving pre-service teacher perceptions of self-efficacy for inclusion. Further, the highest level of education completed prior to entering a teacher preparation program had a very highly significant positive impact on responses of those with bachelor or master degrees compared with pre-service teachers who had only completed secondary education on the subscale of efficacy to use inclusive instruction, possibly further

advancing the notion that education and training are important factors contributing to feelings of teaching self-efficacy in this area. What is interesting, however, is the general lack of statistical difference on the scale and subscales in responses between those rating their training, knowledge, experience, and confidence levels as high or very high and the rest of the respondents. It seems, then, that some experience and training are helpful in raising responses with respect to teaching self-efficacy for inclusion, however, too high a level of knowledge and training has a moderating effect. Perhaps this moderating effect is based on a heightened and humbling sense of what is really required for success as a teacher in an inclusive environment. Brackenreed and Barnett (2006), for example, noticed a similar phenomenon in pre-service teachers in inclusive practicum situations whereby over time they gradually began to become less confident in meeting their own needs such as time to prepare and engage with students at a relaxed pace while teaching. This might be reflected in those who in this study had more comprehensive teaching and training experience; in feeling they were less able to meet their personal needs, they possibly became less confident regarding their efficacy as an inclusive teacher given that issues such as preparation and engagement with students are so critical to the success of inclusion.

The area in which pre-service teachers were preparing to teach (early childhood, primary/elementary, secondary, or special education) had a significant impact on factor two (managing behaviour) and highly significant impact on factor three (collaboration). The differences were found to be between primary and secondary pre-service teachers. Primary pre-service teachers were distinguished by their higher responses on the two subscales when compared to their secondary counterparts. This shows that these primary teachers feel more confident when it comes to issues of managing behaviour and collaboration. Programs for this group, then, might consider a stronger focus on pedagogical issues including planning, instruction, and assessment as opposed to classroom management and collaboration, while greater effort in these areas might be needed in secondary teacher preparation programs. The teaching self-efficacy levels of early childhood and special education teachers were relatively consistent across each subscale, providing support for the implementation of teacher preparation programs with more balanced content in these areas. In teacher preparation institutions offering multiple teacher education programs, consideration might be given to combining these different groups of pre-service teachers for some classes. In this way, the primary/elementary teachers might lend support to secondary pre-service teachers' learning in areas of managing behaviour and collaboration. Combining different groups of pre-service teachers has been put into operation at Arizona State University in the United States with some success (see Waitoller & Kozleski, 2010).

Prior interactions with people with disabilities produced significant differences against the scale as a whole, and the subscale addressing collaboration. Increased interactions were highly or very highly significant determinants of more positive responses, highlighting the value of such experiences in possibly de-mystifying disability and producing more positive views of one's capacity to include and collaborate with others in doing so. Personal interactions with people with disabilities have been found previously to be beneficial in improving attitudes towards disability (see Brownlee & Carrington, 2000; Carroll, Forlin, & Jobling, 2003), and it appears the same is true of perceptions of self-efficacy. Opportunities for such interactions, then, should be strongly considered for inclusion into teacher preparation programs.

Given these results, there are a number of implications for teacher preparation programs. Firstly, given the degree of international differences it must be recognized that contextual and

cultural differences are important. The differences evident particularly between the Hong Kong pre-service teachers and the other three countries, demonstrating that despite what some literature might say (Klassen, 2004; Sharma et al., 2008), with respect to self-efficacy for inclusion assumptions of similarities between countries in the East versus the West without prior investigation can be problematic.

While these results suggest that with respect to inclusive teaching variables such as age and gender have little impact on self-efficacy, important areas for attention by teacher preparation programs, regardless of international context, include raising the confidence of pre-service teachers in teaching students with disabilities, and providing them with opportunities for authentic face-to-face interactions and practical teaching experiences with students with disabilities in inclusive settings. Further, the focus should not be solely on the practical aspects of teaching, but opportunities for discussions of a more theoretical or knowledge-based nature should be made in teacher preparation programs, given the positive impact of knowledge of local law and policy on responses to the scale. In addition, how groups of pre-service teachers training to be in different school contexts such as early childhood, primary/elementary, special education, and secondary, might be involved in some cross-discipline learning opportunities for mutual support should be considered.

## Conclusion

This study examined pre-service teacher reports of self-efficacy for inclusive education from Australia, Canada, Hong Kong and Indonesia and the relationship to a number of demographic variables. Results indicate that strong international differences exist, and that these differences do not always occur between countries with more obvious cultural and contextual differences. Other factors impacting responses regarding self-efficacy and inclusion include the type of teacher preparation program a pre-service teacher is involved in, levels of knowledge about inclusion law and policy, interactions with people with disabilities, confidence levels, and prior teaching experience and training in working with students with disabilities. As many teacher preparation institutions expand their intake and proactively encourage international students to enroll in their courses, such cultural differences in teaching self-efficacy must be given greater consideration.

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